The COST of SLUMS in Newark

Housing Authority of the City of Newark

1946

Members of the Housing Authority of the City of Newark

Rev. William P. Hayes, *Chairman*
Charles B. Schubert, *Vice-Chairman*
Arthur O. White, *Treasurer*
Alexander J. Matturri
Albert Borok

Dr. Carl A. Baccaro, *Executive Director*

Commissioners of the City of Newark

Vincent J. Murphy, *Mayor and Director of Revenue and Finance*
John A. Brady, *Director of Public Affairs*
Meyer C. Ellenstein, *Director of Public Works*
John B. Keenan, *Director of Public Safety*
Ralph A. Villani, *Director of Parks and Public Property*

The COST of SLUMS in Newark

This study was made by JAY RUMNEY, Ph.D. and SARA SHUMAN, M.A.

Housing Authority of the City of Newark

[Second Printing]

ACKNOWLEDGMENTS

Before this report could be written a great deal of material had to be accumulated and examined. This required the cooperation of many municipal officials. We are indebted to the city commissioners for their assistance, and also to their staffs, especially the following:

Dr. Charles V. Craster, City Health Officer and Christopher Nugent, Jr., Assistant Health Officer; Donald W. Campbell, Director, Department of Reference and Research, Board of Education; John Eber, Chief Inspector, Bureau of Combustibles, Fire Department; James H. Farmer, Superintendent, City Alms House; John R. Farrell, Supervisor of Tax Accounting, and Thomas E. Hunt, Chief Assistant Tax Assessor; Owen A. Malady, Director of Relief; Dr. Earl Snavely, Medical Director, City Hospital; Hobart A. Templeton, Chief Identification Officer, Police Department, and the city engineers James W. Costello, L. Dudley Coles, George W. Andress, and John S. Flockhart.

Others who have assisted us are the Central Planning Board of Newark; Warren Vinton, Chief Economist, Lawrence Bloomberg, Associate Chief Economist, Russell Hinckley, Economist, and John Dean, Economist of Region II, of the Federal Public Housing Authority; Joseph Nevin, Executive Secretary, New Jersey Association of Housing Authorities and Harry W. Wolkstein of Newark, C.P.A.

Although we are indebted to all of these persons for their assistance, sole responsibility for the report rests with the authors.

THE COST OF SLUMS IN NEWARK

A number of cities, over a period of years, have attempted to measure "the cost of slums." In every case it has been found that slums are a definite financial and social liability to the cities in which they are located. There is a consistent disparity between the costs of maintaining services in slums and the revenues obtained from them.

The Newark Housing Authority considers it a matter of interest to the citizens and administrators of this community to know how much the slums of this city cost its taxpayers. The purpose of this investigation was to determine the cost of a slum area in Newark by comparing the revenue obtained from taxation and other sources with the costs of maintaining municipal services. Merely showing that expenditures exceed revenue in a slum area would not be sufficient, since there would be no way of knowing whether this might not also be true of non-slum residential areas. Therefore, a similar analysis was made for a very good residential district close to the slum we selected. In addition, some of the savings that can result from rehousing slum families are shown.

The result of this, and similar investigations, showing the tremendous differential which exists between the revenue from a slum and the costs of servicing it, is not surprising. This is only to be expected since slums are areas of physical deterioration, and hence of little revenue, and breeding places of squalor, disease and crime, and hence of high costs.

The huge sums of money spent in the slums would be greatly increased if the services extended to the slum population were adequate in scope and quality. For example, these areas generally have poorer schools, larger classes and insufficient playgrounds. But it is not possible for municipalities, within the confines of their budgets, to extend these services to fully meet the needs.

This study does not take into account the tremendous amounts spent each year in the slums by private social agencies. In Cleveland (16) * where a great differential was also found between the revenue and the public expenditures for a slum area, the amount spent by private agencies constituted about a third of the amount spent by the city. This sum would have to be included to get the total cost of the slum.

It must also be remembered that the problem of slums is directly related to the problem of poverty. The general poverty of the resi-

*Throughout the report the numbers in parentheses refer to items in the bibliography.

dents of slums means that many of their needs will have to be met by the community. Therefore, a part of "the cost of slums" would remain even if the slums conditions were eliminated. Such items as relief are primarily the result of poverty, and the cost of education would not be reduced by improving living conditions. But other items of expenditure, such as those for public health and police and fire protection, would be reduced by improving housing and neighborhood conditions.

A recent study (14) examining the possibilities of redevelopment in the East Harlem blighted area discusses various ways in which municipal costs would be reduced. The redevelopment would result in the closing of many acres of streets, which would greatly reduce the cost of traffic and street lights, snow removal, street cleaning and maintenance. The number of police required for the area could be radically reduced. The cost of garbage and rubbish collections could be greatly reduced by the use of incinerators and centralized rubbish collections. In addition, there would be a reduction in fires as a result of the elimination of rubbish-filled tenements and yards. Playgrounds and community activities lessen delinquency and the costs of courts, welfare agencies, reform schools, prisons and asylums. All of these improvements would be reflected in lower health costs.

Congestion, dilapidated dwellings, and lack of planning which results in inadequate ventilation and sunlight, are conditions that encourage disease and illness. Buildings that are fire hazards and neighborhoods that are conducive to crime and delinquency are all manifestations of slums where the poor are forced to live. But these conditions need not be co-terminous with poverty if realistic programs of rehousing slum-dwellers are undertaken.

It is extremely difficult to separate the excessive costs in slum areas that are due to deterioration and blight and those that should be attributed to the poverty of the inhabitants. However, studies have been made of public housing communities, where low-income families whose economic status has not been changed, live in homes and areas planned for health, safety and comfort. These rehoused families show evidence of improvements in health and reduced crime and delinquency in spite of continued poverty. This indicates that although poverty may be the major factor in producing ill health and crime, these manifestations can be reduced by eliminating one of the conditions resulting from poverty—bad housing. These improvements, if extended sufficiently by the provision of good housing, would be reflected in a reduction of public expenditures.

Because of the limited time and resources at our disposal, we had to overlook many lines of investigation, such as the problem of tax

delinquency which has an important bearing on revenue, and the matter of expenditures by private agencies for social services. It would have added to our knowledge if the areas we invesigated had been larger, and if expenditure and revenue had been studied over a period of years for the ascertainment of any trends. Nor was it possible for us to make an actual study of a "reasonably good" neighborhood, which we discuss later. Our investigation relates primarily to two small areas which we call Lower and Upper Prospect.

Selection of Areas

We selected the areas investigated on the basis of the housing data in the 1940 Census. Using rental as an index of housing conditions we located the three census tracts in the city where the average monthly rentals were the lowest. Two of these tracts were mainly occupied by Negroes. But not wishing to complicate our problem by the inclusion of a "racial" factor, we felt that it would be better to confine ourselves to an area where the majority of the families were white. We, therefore, chose Tract 90 with an average monthly rental of $18.50 which was next to the lowest in the city. To this area we gave the name Lower Prospect.

Because of the proximity of one of the best residential sections in the city, which was only a few blocks from Lower Prospect, we also investigated this area. Besides dramatizing the contrast, it simplified comparisons since distance from the city center has a bearing on the costs of municipal services. This area will be called Upper Prospect.

Description of Areas

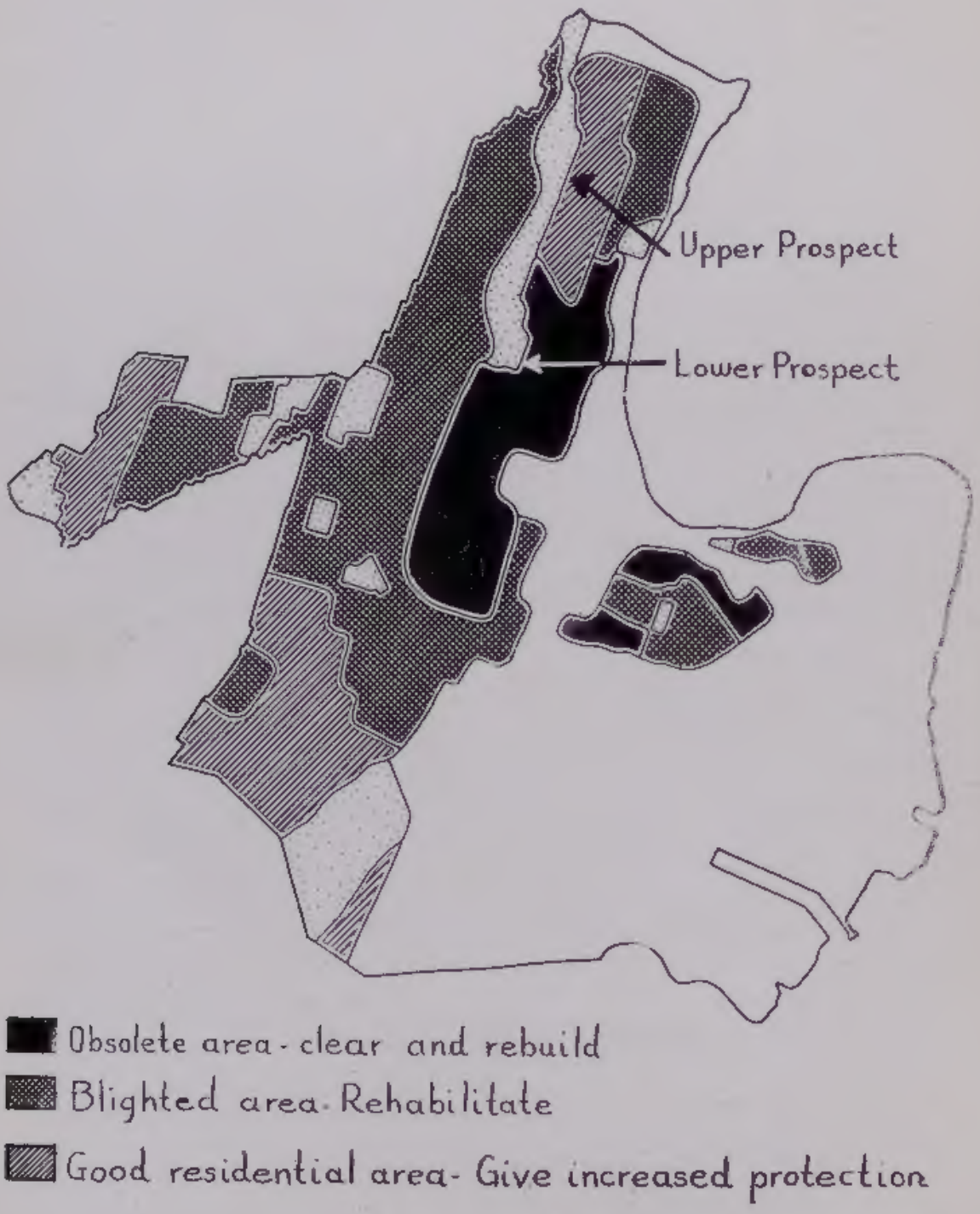
Lower Prospect is a typical slum of seven blocks, indicated by the Newark Planning Board to be part of an obsolete area needing complete clearing. Although it is a very small area it contains 4,144 people, or 1% of the population of the city. Multiple dwellings predominate, but there are also many commercial properties in the area, most with dwellings above them. There are a number of stores, taverns and restaurants. Some of the stores are occupied by political and social clubs, and there are a few pool rooms. A number of the stores are vacant. Lower Prospect contains a few large public properties which are tax exempt. This mixture of residential and commercial properties is typical of slum areas.

From the point of view of housing it is one of the worst districts in the city. Lower Prospect certainly fits the definition of a slum as an "area where dwellings predominate which, by reason of dilapidation, overcrowding, faulty arrangement or design, lack of ventilation,

A PROPOSED HOUSING PROGRAM FOR NEWARK

by the

Central Planning Board of Newark, New Jersey



light or sanitation facilities, or any combination of these factors are detrimental to safety, health or morals."

More than three out of every four dwellings in Lower Prospect need major repairs or have no private bath. This compares with three out of every ten dwellings in the city. This area has the highest percentage of overcrowded dwellings of any census tract in the city. A quarter of the homes are overcrowded. Lower Prospect is one of the most densely populated areas in the city with 159 persons per acre as compared with 34.7 per acre of developed land in the city. One-half of the dwelling units were built before 1900 as compared with a little over a fourth for the city. Over 90% of the units do not have central heat.

A slum is characterized not only by dilapidation and obsolescence, but also by the presence of high rates of disease, crime, dependency and poverty. From actual spot maps made about ten years before this study we have the following figures. The number of juvenile delinquents over a five-year period in Lower Prospect was 165 as compared with one in our good area, Upper Prospect. The number of children dying before their first birthday was 36, compared with one in upper Prospect. From another study we found that in July 1936, this slum area had 27 juveniles and adults on probation and 22 on parole, whereas Upper Prospect had none.

From our own investigation of arrests in 1942, we found the rates per 10,000 persons, based upon the residence of the offender, to be as follows in Lower Prospect as compared with the city:

Offense	Lower Prospect	City
Auto Manslaughter	4.8	1.6
Attempted Suicide	4.8	.7
Grand Larceny	9.7	4.5
Petty Larceny	7.2	5.2
Burglary	12.1	3.8
Gambling	43.4	22.3
Abuse of Children	2.4	.4
Sex Offenses	16.9	7.9
Atrocious Assault and Battery	9.7	6.3
Assault and Battery	19.3	10.4
Desertion and Non-support	9.7	4.7
Manslaughter	4.8	1.7
Fraud and False Pretense	4.8	2.4

The high incidence of crime in Lower Prospect is reflected in the greater costs of police protection in that area.

Upper Prospect is a superior residential neighborhood of 15 blocks of single family dwellings containing 700 people. The average monthly rental, or equivalent rental value, is $111. Almost three-quarters of the dwellings are owner occupied and none of the homes

is overcrowded. Only 3% of the homes were built before 1900. There are no commercial or industrial properties in the area.

The tables which follow compare the housing and social characteristics of these areas. Because the age, nativity and occupational distribution of an area have a bearing on the costs and more indirectly on the revenue, we give the data in Table 2.

Table 1

HOUSING CHARACTERISTICS OF LOWER AND UPPER PROSPECT AND THE CITY

	City	Lower Prospect	Upper Prospect
Acres	16,435	26	63
Population	429,760	4,144	700
No. of Structures	45,679	221	181
No. of Dwellings	116,757	964	181
Medium Number of Persons per Dwelling	3.40	4.32	2.45
Average No. of D. U. per Structure	2.6	4.4	1
Owner Occupied	17%	8%	70%
Overcrowded (1.51 persons or more per room)	5%	24%	0%
Occupied by non-white	11%	4%	0%
Needing major repairs or no private bath	31%	76%	7%
Built before 1900	28%	50%	3%
Average Monthly Rent	$33.36	$18.50	$111.00

Table 2

SOCIAL CHARACTERISTICS OF LOWER AND UPPER PROSPECT

	Lower Prospect	Upper Prospect*
% Native White	69	83
% Foreign-born White	27	16
% Non-White	4	1
	100	100
Age and Sex Composition		
% Male	50	43
% Female	50	57
% Under 5 Years	7.7	3.6
% 5 to 19 Years	36.3	17.1
% 20 to 39 Years	31.5	36.1
% 40 to 64 Years	21.0	33.9
% 65 and Over	3.5	9.3
	100.0	100.0

Persons Per Household		
% 1 Person	7	7
% 2 Persons	16	33
% 3 Persons	14	22
% 4 Persons	15	13
% 5 Persons	13	11
% 6 and 7 Persons	22	10
% 8 and 9 Persons	9	3
% 10 and More Persons	4	1
	100	100
Major Occupation Groups (except for public emergency work		
% Professional Workers	.9	19 1
% Semiprofessional Workers	.3	1.6
% Proprietors, Managers and Officials	5.0	12 4
% Clerical Sales and Kindred Workers	10.6	28.4
% Craftsmen, Foremen, and Kindred Workers	12 8	7 5
% Operatives	44.7	12 0
% Domestic Service Workers	.5	9.2
% Service Workers, Except Domestic	7.3	5 3
% Laborers	14 1	1.9
% Occupation Not Reported	3.8	2.6
	100 0	100 0
Median School Years Completed	6 7	11.4

*The data for Upper Prospect are for the total census tract in which it is located Although Upper Prospect constitutes over half of the blocks in the tract it contains only 18% of the population The figures given are approximate for Upper Prospect since that area represents the best blocks in the tract Of the twelve blocks remaining in the tract five have an average rental of over $7[illegible] and the other seven have average rentals ranging from $38 to $64

The City's Budget

Each year the city auditor prepares a detailed budget itemizing all revenues and expenditures. We used the 1942 budget as the source of our data. Expenditures were treated in the following manner We examined those items where it seemed likely that the per capita expenditure would be greater for the slum population than for the population in good neighborhoods Each of these items, which we call "differential items," was examined in order to determine the amounts spent in the areas studied Included in the differential items were expenditures for health welfare, education and police and fire protection.

The amount remaining in the budget after deducting the expenditures for differential items was allocated on the basis of the average cost per person, for the city. This balance consisted of "general items" which included such expenditures as the cost of elections, debt service, the law department, etc. Where it could not be determined that the cost of services differed from one type of neighborhood to another the amount was treated as a general item.

Below is the 1942 city budget set up to show the amounts spent for the general and differential items

TOTAL CITY EXPENDITURES			$47,183,444
TOTAL EXPENDITURE FOR GENERAL ITEMS			29,180,192
TOTAL EXPENDITURE FOR DIFFERENTIAL ITEMS			18,003,252
WELFARE		$2,059,142	
Relief	$1,627,668		
Alms House	149,465		
Bath Houses and Pools	302,596		
HEALTH		2,069,662	
Health Department	776,475		
Hospital	1,128,731		
Convalescent Hospital	87,706		
Rental of Beds	16,750		
POLICE		3,421,226	
Police Department	3,366,576		
Police Courts	60,650		
FIRE DEPARTMENT		2,071,635	
EDUCATION		8,415,000	

Allocation of Expenditures

Only $18,003,252, or 38% of the city's total expenditures, were treated differentially. The balance of the budget or 62% was divided on a straight per capita basis. If it had been possible to examine a larger number of items we may have found others where the per capita cost was greater in slum areas than in good areas. We had to assume that all items except those that we were able to investigate were equally divided among the total population. This procedure tends to lower the cost of the slums.

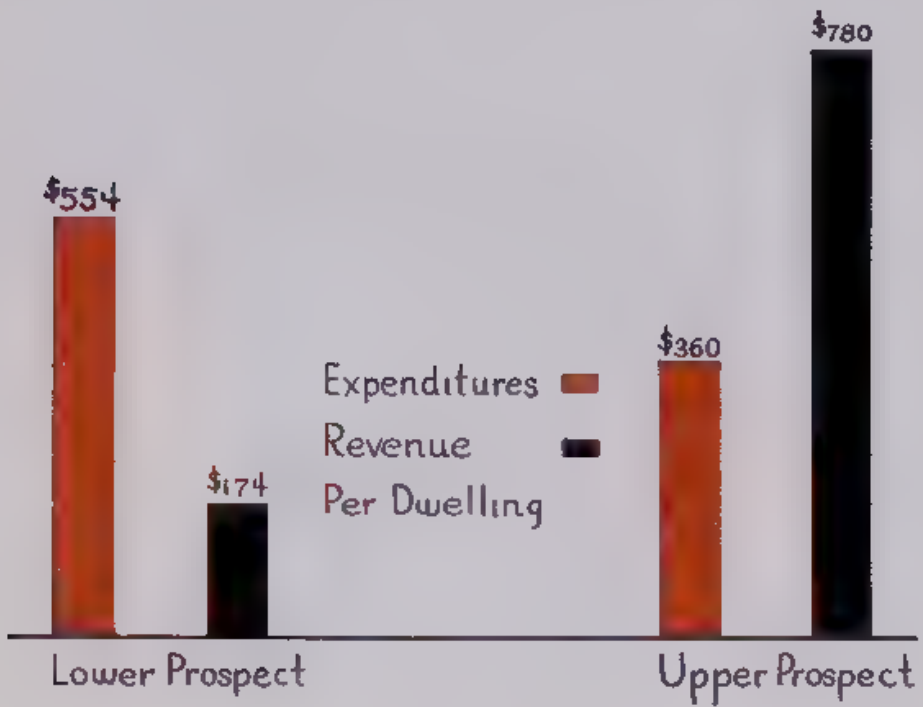
It was necessary to deal with the total budget rather than only with the amounts spent for the differential items because only in this way could we balance the expenditures for the areas against the revenues received from them.

The portion of the city budget expended in Lower and Upper Prospect is shown below. The method used to allocate the proper share of the differential items to each area is explained for every item in Part II.

Table 3

COST OF MUNICIPAL SERVICES, 1942

	City	Lower Prospect		Upper Prospect	
	Total	Total	Per Capita	Total	Per Capita
Relief	$ 1,627,668	$ 39,799	$ 9.56	$ 974	$ 1.39
Alms House	149,465	1,89	.46	0	0
Bath Houses and Pools	302,596	10,710	2.58	0	0
Health	776,475	25,320	6.11	980	1.40
Hospital	1,128,731	7,805	1.88	470	.66
Convalescent Hospital	87,706	1,579	.38	84	.12
Rental of Hospital Beds	16,750	302	.07	15	.02
Police Department	3,366,576	35,607	8.59	4,245	6.06
Police Courts	60,650	667	.16	79	.11
Fire Department	2,071,635	12,147	2.93	1,518	2.17
Education	8,415,000	116,875	28.21	9,256	13.22
Cost of Differential Items	18,003,252	252,508	60.92	17,611	25.15
Balance of Expenditures	29,180,192	281,378	67.90	47,530	67.90
TOTAL EXPENDITURES	$47,183,444	$533,886	$128.82	$65,141	$93.05


$554
$174
$360
$780
Expenditures
Revenue
Per Dwelling
Lower Prospect
Upper Prospect

Dividing the totals for Lower and Upper Prospect by the number of dwelling units in each area, i.e. by 964 and 181, we arrive at the cost per dwelling in Lower Prospect of $553.82 and in Upper Prospect of $359 90.

Revenue

The city's revenue from property taxes, including real and personal property, was obtained from the city's records The amounts for Lower and Upper Prospect were determined on the basis of the assessed valuations of the property in these areas. The balance of the city's revenue, beyond that raised by taxation, comes from such items as licenses, fees, rents from municipal property, etc This amount was divided on a per capita basis and the proper share allocated to Lower and Upper Prospect.

In 1942 the net valuation of taxable property in Newark was $704,750,483 The amount to be raised by taxation was $37,281,316, which gave a tax rate of $5 29 per $100 valuation This rate, applied to the value of the real and personal property in Lower Prospect of $1,302,000, gave $68,876 as the tax levy in that area. In Upper Prospect property was valued at $2,354,100, which gave a tax levy of $124,532. This, of course, represents the potential revenue from taxes from each area and does not consider delinquencies The revenue from Lower Prospect includes the income from the numerous commercial properties in the area In spite of the revenue from this source, the total revenue was not sufficient to cover the expenditures.

Many investigations have shown the high percentage of tax delinquencies in slum areas. Had we been able to study the delinquency situation the actual revenue from Lower Prospect would undoubtedly have been much less than the potential revenue represented by the total tax levy If we had used the actual revenue the *net cost* per person in the area would have been even greater than the figure shown below.

Table 4

REVENUE, 1942

	City		Lower Prospect		Upper Prospect	
	Total	Per Cap.	Total	Per Cap.	Total	Per Cap.
Revenue from Property Taxes	$37,281,316	$ 86 75	$ 68 876	$16 62	$124,532	$177 90
Balance of Revenue	10,224,171	23 79	98,586	23 79	16,653	23 79
TOTAL	$47,505,487	$110 54	$167,462	$40 41	$141,185	$201.69

We can now compare the revenue and expenditures for Lower and Upper Prospect, as shown in the table that follows.

Typical Scenes in

LOWER PROSPECT

UPPER PROSPECT

NEIGHBORS—but worlds apart

Table 5

REVENUE AND EXPENDITURES FOR LOWER AND UPPER PROSPECT

	Lower Prospect			Upper Prospect		
	Total	Per Cap.	Per D.U.	Total	Per Cap	Per D.U.
Revenue	$167,462	$ 40 41	$173.72	$141,185	$201 69	$780 03
Expenditures	533,886	128 82	553 82	65,141	93 06	359 90
	$366,424	$ 88 41	$380 10	$ 76,044	$108 64	$420 13

As Table 5 shows, each dwelling in Lower Prospect cost the city $380.10 *more than the revenue per dwelling* in the area. However, this entire amount cannot be attributed to the fact that this is a slum area, because as studies such as those of Boston (2) and Richmond (26) have shown, it is usual for all but the high rent residential areas to cost more than they yield in revenue. This deficiency is made up by the income from the industrial and commercial properties, and the personalty taxes of large corporations. The phrase "the cost of slums" should not, therefore, be understood to mean simply the difference between the revenue and the cost of services for the area. A *part* of the difference is due to the "normal" or usual costs of residential areas. Only the balance is accountable to the fact that the area is a slum.

It would have been valuable if we could have studied, in conjunction with Lower and Upper Prospect, a reasonably good residential area to determine what the expenditures and revenue were in such an area. We have in mind a neighborhood where the monthly rentals range between $40 and $50, where the dwellings are structurally sound, have running water and a private inside toilet and bathtub, and adequate lighting and heating facilities. Such a neighborhood would have a school, playground and shopping facilities.

We attempted to determine, for our own information, what the expenditures and revenue for such an area would be. The figures we arrived at were based on interpolations of the data for Lower and Upper Prospect. Because they are not based on an actual investigation of a reasonably good neighborhood we did not incorporate these figures in the main body of the text. At the end of Part II is a graph showing one way in which we arrived at these figures.

The projection in Graph 1 would support our theory that in an area with an average monthly rental of $45 expenditures would exceed revenue. Even for areas with that rental there would be a net cost to the city. It would be useful to have actual investigations of several neighborhoods that lie between the extremes we have reported on. In this way we could test the hypotheses in Graph 1, and see (a) if

in areas of the type we described above as "reasonably good," expenditures do, in fact, exceed revenue, and (b) at what rental level do revenues begin to exceed expenditures in residential neighborhoods.

The Extent of Slums in Newark

The Central Planning Board of Newark in its 1945 report on housing conditions in the city (17) stated that 30,8[illegible] or 38,423 units needed major repairs or lacked private bath, private toilet or private water supply. Of these units 14,742 were located in obsolete areas marked for redevelopment, while 23,681 were in areas where "the great need is for rehabilitation on a large scale."

The Board further reports that, "Deterioration of housing facilities has become so serious in Newark that relatively large areas need to be demolished and entirely rebuilt. . . . The protection and rehabilitation of its residential neighborhoods, therefore, is of utmost importance to Newark, both to maintain and increase its revenue and to reduce the heavy costs of its slums."

It is estimated that 55,500 new dwellings should be constructed in Newark in the next 25 years to keep pace with the demands from new families and to eliminate the present substandard accommodations. The cost of such a program, over 25 years, would be about $300,000,000 or $12,000,000 annually.

According to the Planning Board, "Those families who have an income insufficient to pay more than $25 per month, either must be provided accommodations by some form of individual relief or publicly subsidized housing, or they must continue to occupy substandard dwellings." The latter alternative is against the public interest, both on humane and financial grounds, great as may be the cost of replanning, redevelopment and rehabilitation.

The Cost of Slums

We attempted to estimate the cost of slums in Newark on the basis of the figures we arrived at in our study. The 38,423 substandard units the Planning Board talks of were all located in areas that might be termed "slums" or "blighted." Each dwelling in Lower Prospect, where the average monthly rental was $18.50, cost the city $380 more than was received in revenue. Adjusted for the slightly higher average monthly rental of these 38,423 substandard units, the average net cost per unit would be $365. The total net cost for the city's 38,423 substandard units i.e., the difference between the cost of maintaining services and the revenue obtained, would be over $14,000,000

In terms of the city's budget this would represent almost a third of the total amount spent in 1942 This amount should not be confused with the $12,000,000 mentioned above, as the amount that would be required annually for a rebuilding program

As we stated earlier, we believe that part of this cost would remain even if these areas were rehabilitated, for most residential areas require more in expenditures than they yield in revenue Since the revenue from residential areas is directly related to the rent-paying ability of the residents, the rehousing of these families would not increase revenue since their economic status would not be changed. But, certain reductions could be made in the cost of servicing low income families despite their poverty by eliminating slums.

Although we recognize that a city cannot be broken up into segments with each expected to be self supporting, at the same time, there is a limit beyond which communities should not go in supporting residential areas In the case of slums, this contribution does not go, as in the case of good residential areas, to provide decent living standards, but is simply poured out to maintain unhealthy conditions and dilapidated dwellings Each year this amounts to a considerable sum of money which could well go towards the elimination of these slums and their rebuilding into wholesome neighborhoods.

The rehousing of low-income families through urban redevelopment programs and public housing would require that these families receive some subsidy. But, the subsidy would be used to maintain families in decent living conditions, which in turn has a direct influence on such factors as health and crime and thus helps to reduce costs.

Studies, such as those of East Harlem (14) and a Boston South Side district (3) indicate that rehabilitation of blighted areas results in reduced costs of municipal services in the areas. A comparison was made of the income and the costs to the city of Boston for 1943 for a sample area under existing conditions and under the proposed rehabilitation It was estimated that after rehabilitation there would bet a net savings of $26,188 for the area This savings would result mainly from lowering such costs as health, welfare, courts, fires and police service, and hospitals and other institutions

The complex of slum conditions—substandard housing, high density, squalor cannot be separated from its concomitant, poverty It is impossible to separate and allocate the share of the cost of slums that properly goes to poverty and the share due to the slum conditions. However, we can get some idea of the extent to which health,

accident and crime costs are due to slum conditions, apart from the poverty of the inhabitants, by examining what occurs when families are moved from slums to decent housing, without changing their incomes. If we compare the health, accident and fire rates we found in public housing communities, with the rates in low-income, non-public housing areas, we see that good housing can bring about substantial improvements in the welfare of the people even though their poverty remains.

In the following table we project the rates found in public housing communities and those in sample slum areas to the population living in Newark's slums. We show that had the health, accident and fire rates of this latter group been reduced to those prevailing in public housing there would be an equivalent reduction in money costs. The savings shown in Table 6, that might have been made through rehousing slum families, would in the long run be reflected in lowering municipal costs. However, even in the short run city costs would be reduced. Since these are low-income families, many of the expenses resulting from illness and accidents would fall on city agencies, as well as on private agencies Relief, which is a large item of expenditure, would be directly affected by a reduction in the cases of disability and incapacitation of main wage earners

There are many other beneficial consequences that result from rehousing, that are not considered in our table. We have in mind the reduction in delinquency and crime, less absence from school and the reduced incidence of such illnesses as rheumatic fever, pneumonia, etc Nor can we measure, in terms of rates and dollars, the very important but intangible social and psychological changes effected by clean and comfortable housing.

In This Block

the average monthly rental is $20.95

30% of the dwellings need major repairs or have no private bath

In This Block

the average monthly rental is $19.68

97% of the dwellings need major repairs or have no private bath

"BLIGHT

in varying degree has spread over almost the entire city area."

Planning Board of Newark

In This Block

the average monthly rental is $18.48

62% of the dwellings need major repairs or have no private bath

Table 6

POSSIBLE SAVINGS THROUGH REHOUSING[1]

	No. of cases among the slum families[2]	No. of cases had these families been rehoused[3]	Savings that would have resulted from rehousing
TUBERCULOSIS			
$5000 is the estimated total cost of an average case of tuberculosis (Source Essex County Tuberculosis League)	405	201	$1,020,000
INFANT MORTALITY			
$9000 is estimated as the capital value of a boy at birth, and $4000 the value of a girl. Source: "Health and Wealth" Louis I Dublin, (Metropolitan Life Insurance Co.) To take account of the higher infant mortality rate among boys $7240 is used as the average value	179	149	217,200
COMMUNICABLE DISEASES			
$50 is the estimated cost of a case for medical care, public health work, serious complications resulting from the illness, and absences from school	5150	3703	72,350
FATAL HOME ACCIDENTS			
$4500 is the estimated cost per case, including the loss in production and earning capacity. (Source: National Safety Council)	38	0	171,000
FIRES			
$600 is the average cost per fire run This was determined by dividing the budget of the Fire Department by the average number of fires per year	430	115	189,000
$300 is the average loss resulting from residential fires in the city, and $13 is the average loss resulting from fires in the housing projects	430	115	90,405
			$1,741,955

[1] Source The rates used in this table were taken from an earlier investigation "The Social Effects of Public Housing."

[2] Based on the rates found among families living in substandard areas

[3] Based on the rates found among families in public housing

The existence of blight and deterioration has many ramifications, of which the economic loss resulting from the cost of services exceeding revenues, is only one Slums and blight induce residents to leave

the crowded and obsolete city center for the less congested outskirts In a community like Newark where the city is built up to its very borders this has meant a movement out of the city, into the suburbs. Since it is generally the wealthier residents who can afford these more congenial living conditions, a very fertile source of tax revenue is being pushed into the jurisdiction of other taxing bodies This, of course, puts a further strain on the municipality's financial structure. Even where there is space for expansion on the city's fringes it has been indicated that large-scale rehabilitation of the old, obsolete districts in the city's interior is cheaper for the municipality than the building of new communities in the outlying areas where public services must be extended (15).

A slum cannot be segregated Blight, like proliferating cancer cells, spreads and infects adjoining areas If this expansion continues unchecked, more and more property declines in value as owners of good properties in deteriorating neighborhoods are discouraged from maintaining them. A vicious circle of further neglect of property and increasing tax delinquencies is created The only way of stopping blight and preventing huge sums of money from being poured out needlessly is to completely eliminate the slums and blighted areas This may be a painful operation, but it is the only way in which our cities can survive.

Conclusions

1 An investigation of a small slum area in Newark showed that revenue from the area was much less than the cost of municipal services. *The expenditures were 3.2 times greater than the revenue.*

2. In the high-rent area investigated the reverse was true and *the revenue was 2 2 times greater than the expenditures.*

3. The deficit for the slum area would have been even greater had we taken into account tax delinquencies, which are always high in such areas.

4 To the tremendous cost of slums to the municipality must be added the high expenditures by private agencies for the people in such areas.

5 Projecting the figures for the slum area studied to all of Newark's slums, we find that the net cost of slums each year is over $14,000,000

6 A program of slum clearance, rehabilitation, and rebuilding would undoubtedly be costly But, as we have shown, large sums are required to maintain slums, while, on the other hand, good housing, by reducing illness, crime, delinquency, and many other social evils, makes possible community savings

Part II

METHOD OF ALLOCATING MUNICIPAL EXPENDITURES TO LOWER AND UPPER PROSPECT

Relief

The Department of Public Welfare supplied us with the total number of persons on relief in July 1944, and the number from Lower and Upper Prospect. We applied the percentage of persons on relief, in that period, from our areas to the average number receiving relief in 1942 which gave us 244 persons from Lower Prospect and 6 from Upper Prospect. The average annual cost of relief per person in 1942, as supplied by the Department of Public Welfare, was $162.29. This gave a total expenditure in Lower Prospect of $39,598.76, and in Upper Prospect of $973.74.

Alms House

The budget of the alms house in 1942 was $149,465. There were 394 residents at an average cost of $379.35. An examination of the records showed that during the year there were 214 new admissions. None came from Upper Prospect, but 3 or 1.2% came from Lower Prospect. Applying this percentage to the number of old residents it gave a total of 5 residents from Lower Prospect. At $379.35 per case the expenditure for persons from that district was $1,896.75.

Bath Houses and Pools

Before investigating the amount of money spent for this service in Lower Prospect we attempted to get an approximate idea of this sum by using the following method. We assumed that the public baths would be used chiefly by families with no private bath and that the public pools would largely serve these same people. Therefore, we took from the Census the number of dwellings in the city which had no private baths and divided this number into the expenditure of the Bureau of Baths. This amount times the number of dwellings in Lower Prospect with no private baths gave us an expenditure of $10,809 or only $99 more than the amount arrived at by the method described below.

One of the city's bath houses and pools is located in Lower Prospect, although it serves a greater area. An official of the Bureau of Baths indicated the general section this bath house and pool served. The number of dwelling units in that area was obtained from the census and the budget of the bath house and pool were divided by that number to determine the cost per dwelling unit. This amount

was multiplied by the number of dwelling units in Lower Prospect to give $10,710 as the amount spent.

Persons in Upper Prospect did not use the public baths and pools and there was therefore no expenditure for this service

Health

To determine what proportion of the budget of the Health Department of $776,475 was spent in Lower Prospect and Upper Prospect, each of the 14 divisions of the department was treated separately. The head of each division submitted a ratio of expenditures for Lower Prospect and Upper Prospect For example, the Occupational Clinic spent $4 for each resident in Lower Prospect for every $1 spent in Upper Prospect. For those items where the ratio for the two areas was 1 to 1 it assumed that since the best and worst areas in the city received the same expenditures per person the amount would be the same as the average for the city, as in the cases of the Industrial, Sanitary and Plumbing divisions.

The combined ratios, adjusted to take account of the differences in the size of the appropriations for the various divisions, was 4 3 in Lower Prospect to 1 in Upper Prospect. In order to translate this ratio into actual dollars and cents, the amount spent in either Lower Prospect or Upper Prospect had to be established For one division, that of Child Hygiene, this could be done In this division $4,600 was spent in Lower Prospect, or $1.11 per capita whereas there was no expenditure by this division in Upper Prospect. This division had the most extreme ratio since there was no expenditure in one of the areas. The Dispensary had the next highest ratio of 9 to 1 Proceeding on the basis that the Child Hygiene ratio could be no less than this 9 to 1 ratio, we get a per capita cost of $.12 for Upper Prospect or one ninth of $1.11 The per capita cost for the city, for Child Hygiene, was $.15 or 20% higher than the $ 12 for Upper Prospect

This relationship between the cost in Upper Prospect and in the city was used to establish the per capita cost in Upper Prospect for each division. The per capita for the city was obtained and 80% of this amount was used as the cost for Upper Prospect Then, the ratio supplied by each division was used to obtain the cost for Lower Prospect For example, the city per capita for the Occupational Clinic was $ 06 and 80% of this gave $ 05 as the per capita for Upper Prospect The ratio of expenditure was 4 to 1, giving 4 times $ 05 or $ 20 as the per capita cost for this division in Lower Prospect

Using this method the combined cost for the 14 divisions of the Department of Health was $6 11 per person in Lower Prospect and $1 40 in Upper Prospect, or of a total cost of $25,320 and $980

Table 7

COST OF HEALTH SERVICE

Division	Expenditures	City	Cost per Capita Lower Prospect	Cost per Capita Upper Prospect
Child Hygiene	$ 64,000	$ [illegible]	$1 11	$ [illegible]
Executive	72,000	17	42	14
Parochial School Inspection	26,000	06	10	05
Bacteriological Laboratory	2[illegible]	[illegible]	36	06
City Dispensary	1[illegible]	36	2 61	29
Communicable Disease	69,000	16	26	13
Tuberculosis	36 000	08	13	06
Venereal Disease	6[illegible]	16	33	13
Food and Drug	74,500	17	28	14
Veterinary	33 500	08	63	06
Occupational Clinic	25 600	06	20	05
Sanitary	63 700	15	15	17
Plumbing	2[illegible] 600	05	05	05
Industrial	35 000	08	08	08
Balance of Budget	4 275	01	01	01
	$776 4[illegible]	$1 81	$6 1[illegible]	$1 40
Population			4144	[illegible]00
TOTAL COST			$25,319 84	$980 00

Hospital

An examination of the Hospital records for 1942 showed that 94 patients had been admitted from Lower Prospect and 3 from Upper Prospect The average cost per day for the 14,517 bed patients was $4 57, and the average stay was 14 6 days, making the average cost per patient $66 72.

The total cost of bed patients was $972,177 leaving a balance of $156,554, in the budget to be allocated This balance was divided on a straight per capita basis. Combining these amounts we get a total expenditure for hospital service in Lower Prospect of $7 805 and in Upper Prospect of $459.

Convalescent Hospital and Rental of Hospital Beds

The percentage that Lower Prospect and Upper Prospect took of each of the items we examined in the city budget were averaged and those average percentages were used to determine the share to go to each area of the appropriations of $87,706 for the Convalescent Hospital and $16,750 for the rental of beds. These amounts combined were $1,881 for Lower Prospect and $100 for Upper Prospect.

Police Protection

Arrests, by the residence of the offender, were used as an index of the expenditures of the Police Department in Lower and Upper Prospect. The 11,234 arrests in the city were classified into groups

and given a weight from 1 to 10 according to their costliness to handle, by an official of the Police Department. The weight multiplied by the number of arrests in each category was divided into the budget of $3,366,576 to give the cost per unit of arrest. This method of weighing took into account not only of the number of arrests, but also the severity of the offense in terms of cost to the Police Department.

In Lower Prospect the 83 arrests amounted to 260 units which gave an expenditure of $35,607. In Upper Prospect the 6 arrests equalled 31 units, costing $4,245.45.

Police Courts

The share of the budget of the Police Courts to be allocated to Lower and Upper Prospects was determined by applying the same percentages to this item as each area had taken of the appropriation for the Police Department. Our investigation showed that Lower Prospect took 1.1% of the total budget of the Police Department and Upper Prospect took .13%, therefore these percentages were taken of the Police Court budget. This amounted to $667 for Lower Prospect and $79 for Upper Prospect.

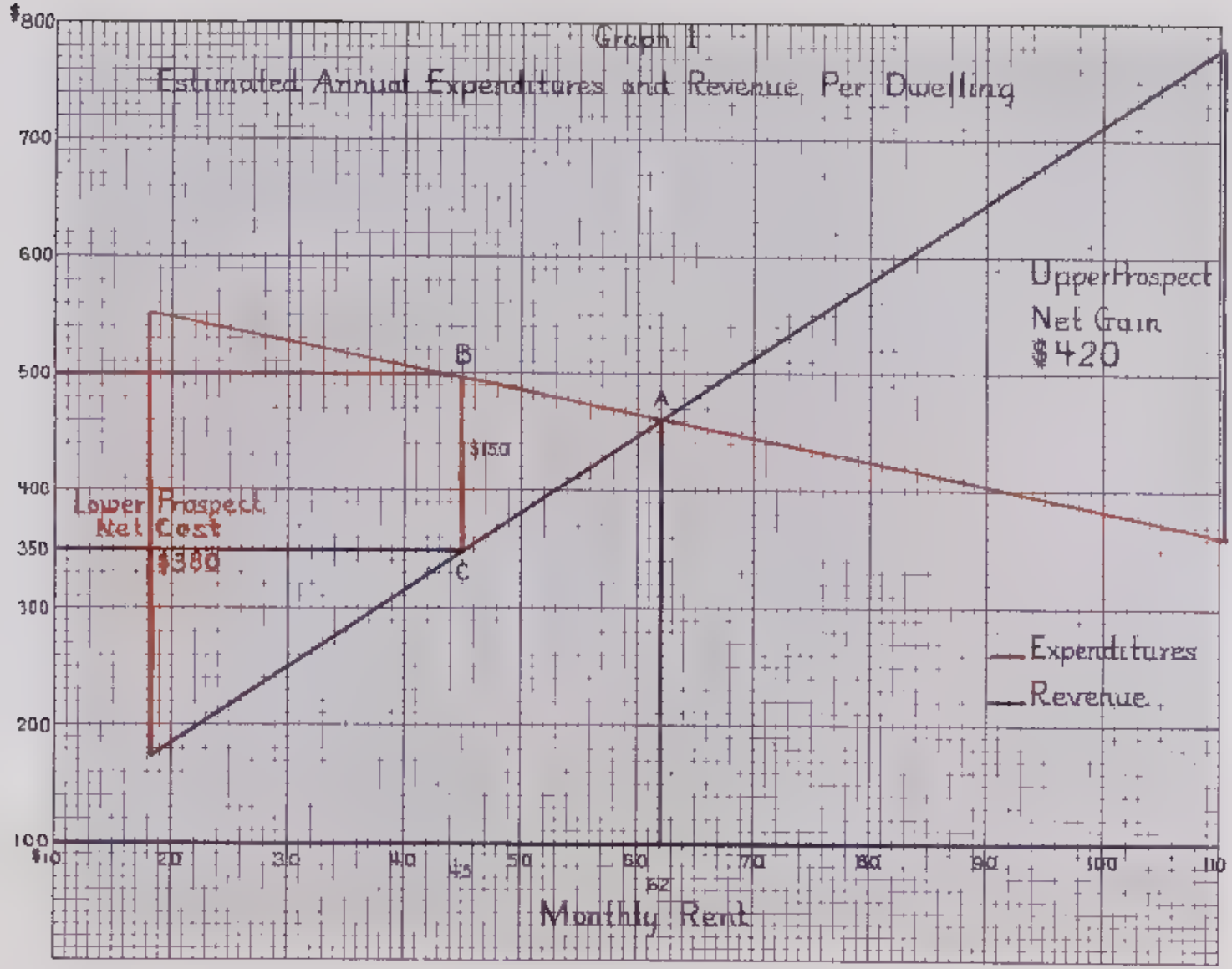
Fires

The number of fires in each area was determined by examination of the records. Fires in Lower Prospect were responded to by four engine companies and two truck companies, whereas Upper Prospect fires called out three engine companies and one truck company.

The total budget of the Fire Department of $2,071,635 was divided by the total number of runs by the engine and truck companies to give an average cost of $126.53 per run. Each of the 16 fires in Lower Prospect was multiplied by six and the three fires in Upper Prospect by four, the number of companies called out to respond to each fire. This number multiplied by the cost per run gave a total expenditure of $12,146.88 in Lower Prospect and $1,518.36 in Upper Prospect.

Education

We assumed that the cost of educating a child in the public schools would be approximately the same in Lower and Upper Prospect. Approximately the same percentage of public school pupils in both areas were in elementary school so no adjustment was made for the higher cost per pupil in the high schools. The primary difference in cost is due to the fact that there are so many more children per adult person in the lower economic groups. In Lower Prospect 20% of the population consisted of children attending public schools,


Graph 1
Estimated Annual Expenditures and Revenue Per Dwelling
$800
700
600
500
400
350
300
200
100
$10
20
30
40
45
50
60
62
70
80
90
100
110
Monthly Rent
B
A
C
$150
Lower Prospect
Net Cost
$380
Upper Prospect
Net Gain
$420
Expenditures
Revenue

whereas only 10% of the population of Upper Prospect were in that category.

The total cost of education divided by the number of pupils gave a per pupil cost of $138.15. This amount times the 846 public school pupils in Lower Prospect and the 67 in Upper Prospect gave a total cost of $116,875 and $9,256.

"Excess Cost"

In Graph 1 we assume that revenue increases and expenditures decrease in direct proportion to the increase in rent. Possibly the change is gradual in the lower rent categories and accelerated in the high rent groups. But, since we could not determine the rate of change, we assumed an even progression.

Point A, on the graph, shows that at a monthly rental of $62. revenue and expenditures are equal. At every rental above $62 revenue exceeds expenditures while all dwellings under that rental show a net cost.

Points B and C were placed at $45 per month, which was assumed to be the approximate rental of dwellings of minimum safety and comfort in fairly good neighborhoods. At this rental expenditures exceed revenue leaving a net cost per unit of $150.

It is approximately this amount which we believe to be the "normal" cost of dwellings in a fair residential area. The difference between this amount and the net cost of a slum dwelling, i.e., $230, would be the amount per dwelling attributable to the slum conditions, or the "excess cost" of a slum dwelling.

Part III

SLUMS—FACTS AND FIGURES

Slums have been with us many years, far too many, but the public's awakening to their seriousness and urgency is of fairly recent origin. Both in England and in this country the middle eighties saw a great deal of literature on "how the other half lives" and "the shame of our cities". The studies of Charles Booth and Jacob Riis stirred the consciences of people.

Some years later there appeared the pioneering studies of the Hull House, Robert A. Wood's 'The City Wilderness", the reports of the New York State Commission on Tenements and the monumental Pittsburgh Survey. The end of the last war saw the first studies on the cost of slums.

In the following paragraphs we shall present a brief review of the more recent studies that have been made. First we sum up the pertinent facts relating to the financial costs of slums. Then we show the social costs of slums in terms of crime, disease, etc. These social costs must be considered not only in terms of dollars and swollen municipal budgets, but also in terms of human misery and suffering.

The Financial Cost of Slums

The following table gives a general idea of the extent to which slums and blighted areas in various cities contribute to the cost of their maintenance. These ratios are not comparable because the studies on which they are based were made by very different methods. Therefore, it would be incorrect to conclude from the table that the blighted area in Hartford contributed twice as much to its support as did the Atlantic City slum.

In some cases the revenue refers to the potential income from taxes levied on the property in the area, in other cases it is computed from the actual income from taxes, allowance being made for delinquencies. Some of the investigations include revenue from sources other than property taxes. On the expenditure side there are as many variations in the methods of determining the cost of services in the slum areas. Although, for these reasons, the figures for the various cities cannot be compared, they show that in slums costs consistently exceed revenues.

Table 8

RATIO OF EXPENDITURES TO REVENUE IN SLUMS IN 13 AMERICAN CITIES

		Expenditures	Revenue	Ratio
Cleveland, Ohio	1932	$1,356,978	$225 035	6 0
Atlantic City, N. J	1933	153,372	17,071	9 0
Chicago, Ill.	1933	3,200 000	586 061	5 5
Elizabeth, N J	1933	220 739	47,317	4 7
Hartford, Conn.	1933	465,697	104,244	4
Indianapolis, Ind.	1933	92,775	11,312	8 2
Boston, Mass.	1934	310,624	44,800	6.9
Birmingham, Ala.	1935	2,132,923	317,086	6.7
Camden, N. J	1935	201,534	44,723	4.5
Atlanta, Ga.	1935	74,380	7,539	9.9
Toledo, Ohio	1935	18,040	4,229	4 3
Los Angeles, Cal.	1942	4,610,244	2,070 000	2.2
Newark, N J.	1942	552 219	167,462	3.3

The Social Cost of Slums

There have been numerous investigations, in the past 15 years, showing the high incidence of illness, fires and anti social behavior in slums as compared with the city average, or good residential areas in the city. A number of these studies are summarized below.

Buffalo, New York, 1933 (4)

Average Annual Cost per Family

	Slum	City
Police Protection	$27.16	$19 19
Fire	35 79	15 40
Juvenile Delinquency	.60	.25
Public Health	52 56	15 52
Public Welfare	224 01	89.50

Indianapolis, Indiana, 1933 (30)

A slum area containing 10 4% of the city's population had

24% of the cases at the venereal disease clinic
19% of the patients at the hospital for the insane
30% of its hospital services
33% of the cost of public relief
17% of the cost of extinguishing fires
25% of the cost of arrests and imprisonment
36% of the cost of felony cases

The cost per person in the slum area for maintaining municipal services was $27.29 as compared with $4.00 per person in other areas. Twenty-six per cent of the city's funds were spent for this 10% of its population.

22% live in obsolete areas that should be cleared and rebuilt

48% live in areas that need rehabilitation

How Newark Lives

Only 30% live in good neighborhoods

Cleveland, Ohio, 1934 (16)

A small slum area occupied by 2.5% of the city's population had

10% of the city's illegitimate births
12% of the city's tuberculosis deaths
26% of the city's vice centers
8% of the city's juvenile delinquency
21% of the city's murders

In addition, this area took—

14% of the city's expenditures for fire protection
6% of the city's expenditures for police protection
8% of the city's expenditures for public health
8% of the county's expenditures for relief

Hartford, Connecticut, 1935 (10)

A slum area with 25% of the city's population had—

51% of the tuberculosis cases
55% of the illegitimate births
57% of the juvenile delinquency
62% of the adult arrests
38% of the commitments to State mental institutions
68% of the relief cases

Detroit, Michigan, 1938 (7)

In comparison with a normal residential area, the slum area had—

3 times as many deaths from pneumonia
10½ times as many deaths from tuberculosis
6 times as many infant deaths
15 times as many crimes

Birmingham, Alabama, 1940 (1)

The four districts with the worst housing had the highest proportion of problem families. More than two-thirds of the housing was reportedly substandard and more than 45 per cent of the families were involved in economic, social or health difficulties in 1940. Because of the extent of the problems in these areas they also received the largest amount of economic assistance, social adjustment and health service.

An earlier study, 1936, (12) gave the following results:

	Blighted Areas	City
Fires per square mile	131.0	54.0
Infant deaths per 1,000 births	76.8	63.8
All deaths per 1,000 population	14.3	10.5
Reportable diseases per 1,000 population	31.6	19.1

Washington, D. C., 1940 (29)

	Substandard Tracts	City
Tuberculosis deaths per 100,000 population	177.0	89.1
Pneumonia deaths per 100,000 population	101.0	80.3
Infant mortality per 1,000 births	62.0	46.8

Denver, Colorado, 1941 (6)

Infant mortality rates in some of the worst housing districts was more than five times those of the best sections of the city. Juvenile delinquency in 1932-36 in these districts was 64.8 for 1,000 of the school population as compared with 29.5 for the city as a whole.

Milwaukee, Wisconsin, 1942 (27)

A blighted area containing 1.5% of the city's population had—

22% of the city's arrests for criminal assault
50% of the city's arrests for prostitution
50% greater infant mortality

Newark, New Jersey, 1942-43 (19)

	Public Housing	Low Economic Areas
Tuberculosis per 10,000 persons 15 to 40	29.2	58.8
Infant mortality per 1,000 births	34.7	41.5
Communicable diseases per 1,000 children under 15	114.2	158.8
Fatal home accidents per 10,000 persons	0	2.5
Fires per 10,000 persons	7.9	28.8 (city avg.)

Philadelphia, Pennsylvania, 1943 (21)

	Public Housing	City
Juvenile delinquency per 1,000	1.84	2.84
Adult offenses per 1,000	.66	33.18
Tuberculosis death rate, per 1,000	.33	5.98
Pneumonia death rate per 1,000	.33	5.86

Fires were reduced from 28 before the project was built, to 1 in the same area.

Los Angeles, California, 1944 (13)

	Blighted Area	Good Area
Incidence per 10,000 persons (nurse home visits)		
Tuberculosis	705	91
Communicable diseases	69	14
Venereal diseases	13	1
Health Service	356	54
Fire alarms	256	142
Police arrests	350	100
Juvenile delinquency cases	68	10

Pittsburgh, Pennsylvania, 1944 (22 and 23)

	Public Housing	Low Economic Area
% illegitimate births	6.9	13.1
Deaths per 1,000 population	11.8	22.0
Infant mortality per 1,000 births	41.6	71.0
Infectious diseases per 1,000 pop. under 15 yrs.	56.6	43.8
Juvenile delinquency per 10,000 pop. 10-17	383.0	570.0

Gary, Indiana, 1945 (9)

	Public Housing	City
Communicable diseases per 1,000 school children	8.0	11
Arrests for crime per 1,000 white population	1.5	20
Arrests for crime per 1,000 negro population	6.0	50
Average cost for residence fires	$0.65	$2.58
School grades: % Excellent	9	11
% Satisfactory	82	77
% Unsatisfactory	9	12

The United States (25)

Slums and blighted districts comprise about 20% of the metropolitan residential areas and contain 33% of the population, yet they contribute—

45% of the major crimes
50% of the arrests
55% of the juvenile delinquency
60% of the tuberculosis victims
50% of the disease
35% of the fires
45% of the city service costs
and only
6% of the tax revenues (real estate).

BIBLIOGRAPHY

1. Housing Authority of the Birmingham District. *Social and Economic Survey of the Birmingham District*, 1940.

2. The City Planning Board, Boston, Massachusetts. *The Income and Cost Survey of the City of Boston*, 1935.

3. ..... *Rehabilitation in Boston*, Vol. 3, 1946.

4. Buffalo Municipal Housing Authority. *Ten Years of Progress*, 1934-1944.

5. Churchill, Henry S. and Ittleson, Roslyn. *Neighborhood Design and Control*, National Committee on Housing, 1944.

6. University of Denver Reports. *Housing in Denver*, Bureau of Business and Social Research and the School of Commerce, Accounts and Finance, 1941.

7. City of Detroit Housing Commission. *Fifth Annual Report*, 1938.

8. Ford, James. *Slums and Housing*, Harvard University Press, 2 Vols., 1936.

9. Housing Authority of the City of Gary, Indiana. *A Report*, 1945.

10. Mayor's Housing Committee, Hartford, Connecticut. *An Economic Analysis of a Substandard Area in Hartford*, 1935.

11. Research Bureau, Council of Social Agencies, Houston, Texas. *The Houston Delinquent in His Community Setting*, 1945.

12. Jefferson County Board of Health. *Final Statistical Report of Surveys of the Blighted Areas*, 1936.

13. Planning Commission of the City of Los Angeles. *Comparison of Blighted and Good Areas in Los Angeles*, 1945.

14. The Manhattan Development Committee. *A Realistic Approach to Private Investment in Urban Redevelopment, Applied to East Harlem as a Blighted Area*, The Architectural Forum, 1945.

15. McHugh, F. Dodd. *Cost of Public Service in Residential Areas*, American Society of Civil Engineers, New York, 1942.

16. Navin, R. B. *An Analysis of a Slum Area in Cleveland*, Regional Association of Cleveland, 1939.

17. Central Planning Board of the City of Newark, New Jersey. *A Preliminary Report on Housing Conditions and Policy for Newark, New Jersey*, 1945.

18. Housing Authority of the City of Newark, New Jersey. *Public Housing Pays Dividends*, 1945.

19. ..... *The Social Effects of Public Housing*, 1944.

20. State Housing Authority of New Jersey. *Memorandum on the Cost of Slums*, 1936.

Continued

21. Philadelphia Housing Authority. *Homes for War Workers and Families of Low Income*, 1943.

22. Bureau of Social Research, Federation of Social Agencies of Pittsburgh and Allegheny County. *Juvenile Delinquency in Public Housing*, 1944.

23. ..... *Vital Statistics of Public Housing Residents*, 1945.

24. Post, Langdon W. *The Challenge of Housing*, Farrar & Rinehart, Inc., New York, 1938.

25. Reynolds, W. E. *Post-War Urban Redevelopment*, Federal Works Agency, Washington, 1939.

26. City Planning Commission, Richmond, Virginia. *A Preliminary Report on Housing Conditions and Policies*, 1942.

27. United States House of Representatives, Committee on Public Buildings and Grounds. *Hearings on Post-War Planning*, No. 2, 1944.

28. United States Senate, Committee on Banking and Currency. *A Bill to Establish a National Housing Policy and Provide for its Execution*, Hearings on S-1592, Part 1, 1945.

29. ..... Subcommittee of the Committee on the District of Columbia. *A Resolution Authorizing an Investigation of the Program of the National Capital Housing Authority*, Hearings on S. Res. 184, Part 1, 1944.

30. Walker, Mabel L. "Economic Costs of Slums and Blighted Areas", *Urban Blight*, Papers presented at 13th Conference of the Government Research Association, 1942.

31. ..... *Urban Blight and Slums*, Harvard University Press, 1938.

32. Wood, Edith Elmer. *Introduction to Housing*, Federal Works Agency, Washington, D. C., 1940.

33. ..... *Slums and Blighted Areas in the United States*, Washington, D. C., Federal Emergency Administration, Public Works, Housing Division Bulletin No. 1, 1935.